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SAFE FOOD HANDLING FOR IMMUNOCOMPROMISED INDIVIDUALS



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WHAT IS FOOD POISONING?

Food poisoning (also known as foodborne illness or food-related illness) is caused by eating food that has been contaminated by bacteria, viruses or parasites. Food can become contaminated by these microorganisms at any time before you eat it, including at home during:

- » handling
- » storing
- » cooking

There are many signs of food poisoning, but most types cause one or more of the following:

- » nausea
- » vomiting
- » diarrhea
- » stomach pain and cramps
- » fever and chills

Symptoms can start within hours after eating the contaminated food, or sometimes not until days or even weeks later. Usually, people recover quickly and completely.

However, food poisoning sometimes causes serious complications, including death. This may be the case for people who are more at risk for both food poisoning and related health complications, like those with a weakened immune system.



FOOD POISONING AND IMMUNOCOMPROMISED PERSONS

Some conditions, as well as treatments for certain diseases, can weaken your immune system.

When your immune system is weak, it can be harder for your body to fight disease, so you are more likely than the general population to get food poisoning, and to have serious health effects as a result. Some examples of conditions that can weaken your immune system are:

- » Alcoholism
- » Cancer (especially for people getting chemotherapy/ radiation treatments)
- » Diabetes
- » HIV/AIDS
- » Organ transplant

You will also have lower immunity levels than usual if you are taking high doses of drugs, such as steroids or immune suppressants.










If you have any conditions that can affect your immune system, talk to your doctor about your increased risk of food poisoning. If you are at increased risk, it is very important that you be careful about what you eat and how you store, prepare and cook your food.

This guide offers helpful advice on how to reduce your risk of food poisoning.



SAFE FOOD ALTERNATIVES FOR IMMUNOCOMPROMISED INDIVIDUALS

Some types of food can be a higher risk for people with a weakened immune system, because of how they are produced and stored. To lower your chances of getting food poisoning, you should avoid those foods. The following chart can help you make safer food choices.

TYPE OF FOOD	FOOD TO AVOID	SAFER ALTERNATIVES
 Hot dogs	Hot dogs straight from the package, without further heating.	Hot dogs that are well cooked to a safe internal temperature. The middle of the hot dog should be steaming hot or 74 °C (165 °F).
TIP » Avoid spreading juice from hot dog packages onto other food, or to cutting boards, utensils, dishes and counters. Wash your hands after touching hot dogs.		
 Deli meats	Non-dried deli meats, such as bologna, roast beef and turkey breast.	Dried and salted deli meats, such as salami and pepperoni. Non-dried deli meats that are heated until steaming hot.
 Eggs and egg products	Raw or lightly cooked eggs, or egg products that contain raw eggs, including some salad dressings, cookie dough, cake batter, sauces, and drinks (like homemade eggnog).	Egg dishes that are well cooked to a safe internal temperature of 74 °C (165 °F). Cook eggs until the yolk is firm. Homemade eggnog heated to 71 °C (160 °F).
TIP » Use pasteurized egg products when making uncooked food that calls for raw eggs.		
 Meat and poultry	Raw or undercooked meat or poultry, such as steak tartar.	Meat and poultry that are cooked to their safe internal temperature (Refer to the Internal Cooking Temperatures Chart on page 12).
 Seafood	Raw seafood, such as sushi.	Seafood cooked to a safe internal temperature of 74 °C (165 °F).
	Raw oysters, clams and mussels.	Oysters, clams and mussels that are cooked until the shell has opened.
	Refrigerated, smoked seafood.	Smoked seafood in cans, or seafood that does not need to be refrigerated until it is opened.
 Dairy products	Raw or unpasteurized dairy products.	Pasteurized dairy products and any dairy products that are cooked, in a casserole or au gratin.
	Unpasteurized and pasteurized soft cheeses, such as Brie and Camembert.	Pasteurized cheeses such as cheese curds, cheddar and cottage cheese.
	Unpasteurized and pasteurized semi-soft cheeses, such as Havarti.	Pasteurized processed/spreadable cheeses, such as cream cheese.
	All unpasteurized and pasteurized blue-veined cheeses.	Pasteurized and unpasteurized hard cheeses, such as Romano and Parmesan.
 Sprouts	Raw sprouts such as alfalfa, clover, radish and mung beans.	Thoroughly cooked sprouts.
 Pâtés and meat spreads	Refrigerated pâtés and meat spreads.	Pâtés and meat spreads sold in cans, or that do not have to be refrigerated until they are opened.
 Fruit juice and cider	Unpasteurized fruit juice and cider.	Unpasteurized fruit juice and cider that are brought to a rolling boil and cooled. Pasteurized fruit juice and cider.

WHAT DO I NEED TO KNOW WHEN SHOPPING FOR FOOD?

You should:

- » buy cold or frozen food at the end of your shopping trip
- » check the “best before” date on your food
- » check fruits and vegetables to avoid buying items that are bruised or damaged
- » avoid spreading bacteria from raw food to ready-to-eat food by:
 - putting raw food in individual plastic bags (which can be found in the produce section and at some meat counters)
 - keeping your raw meat, poultry, fish and seafood away from other food in your grocery cart
 - labelling using the same bag or bin for raw meat, poultry, fish and seafood and labelling the bag or bin
- » refrigerate or freeze raw meat, poultry, fish and seafood as soon as you get home from the grocery store; perishable food should not be left out for more than:
 - 1 hour during summer outdoor activities
 - 2 hours at room temperature
- » wash your reusable grocery bags often, especially if you are carrying raw meat, poultry, fish and seafood

WHAT DO I NEED TO KNOW WHEN STORING FOOD?









It is important to keep cold food cold, and hot food hot. Perishable food should never reach temperatures between 4 °C to 60 °C (40 °F to 140 °F). This is because this temperature range is where bacteria can grow quickly and cause food poisoning.

You can reduce your chances of getting food poisoning if you:

- » set your fridge at 4 °C (40 °F) or lower
- » set your freezer at -18 °C (0 °F) or lower
- » put raw meat, poultry, fish and seafood in sealed containers or plastic bags on the bottom shelf of your fridge—this prevents raw juices from dripping onto other food
- » store cut fruits and vegetables in the fridge
- » refrigerate or freeze raw meat, poultry, fish, seafood or leftovers immediately; dangerous bacteria can grow if left out for more than:
 - 1 hour during summer outdoor activities
 - 2 hours at room temperature
- » cook raw meat, poultry, fish and seafood by the “best before” date, or no more than 2 to 4 days after buying it
- » freeze raw meat, poultry, fish or seafood if you do not plan on cooking by the “best before” date

FRIDGE AND FREEZER STORAGE

If you freeze food that is well-wrapped, it can last longer. Here are the recommended refrigeration and freezing times for different foods.

FOOD		FRIDGE AT 4 °C (40 °F) OR LOWER	FREEZER AT -18 °C (0 °F) OR LOWER
 Fresh meat and poultry	Beef, pork, lamb and veal	2–4 days	8–12 months
	Chicken and turkey (whole and pieces)	2–3 days	6–12 months
	Ground meat and raw sausages	1–2 days	2–3 months
 Fresh fish	Lean fish (e.g., cod and sole)	3–4 days	6 months
	Fatty fish (e.g., salmon, tuna and trout)	3–4 days	2 months
	Shellfish, cooked or uncooked (e.g. clams, crab, lobster, scallops and shrimp)	1–2 days	2–4 months
 Ham, bacon and wieners	Cooked ham	3–4 days	2–3 months
	Bacon	By “best before” date or 1 week	1 month
	Opened hot dogs	1 week	1–2 months
 Lunch meat and deli food	Opened and deli-packaged lunch meat	3–5 days	1–3 months
	Deli or homemade salads	3–5 days	Do not freeze
 Leftovers	Cooked meat, stews, and egg or vegetable dishes	3–4 days	2–3 months
	Cooked poultry, fish, meat broth, gravy and soups	3–4 days	4–6 months
 Eggs	Fresh in shell	By “best before” date or 3–4 weeks	Do not freeze
	Fresh out-of-shell	2–4 days	4 months
	Hard-boiled	1 week	Do not freeze
	Opened egg substitutes	3 days	Do not freeze
 Dairy products	Opened milk, yogurt and cottage cheese	4 days	Do not freeze
	Cheeses	By “best before” date	Up to 1 year
	Opened butter	3 weeks	Do not freeze
 Vegetables	Tomatoes	Do not refrigerate	2 months
	Lettuce	3–7 days	Do not freeze
	Beans (green or waxed), spinach and summer squash	5–7 days	8–12 months
	Carrots, celery and winter squash	2 weeks	10–12 months

WHAT DO I NEED TO KNOW WHEN DEFROSTING FOOD?

You should:

- » defrost your raw meat, poultry, fish and seafood in:
 - the fridge
 - the microwave
 - a sealed bag or container submerged in cold water
- » if you use the microwave, cook it immediately after thawing it
- » defrost larger pieces of meat (such as a whole turkey) in its original wrapping and submerge it in cold water
 - change the water often to make sure that it stays cold (approximately every 30 minutes)
- » do not refreeze thawed food

YOU CANNOT ALWAYS TELL IF FOOD IS SAFE BY ITS LOOK, SMELL OR TASTE. WHEN IN DOUBT, THROW IT OUT!

WHAT DO I NEED TO KNOW ABOUT FOOD AND CLEANLINESS?

Reduce the risk of bacteria growth and food poisoning by properly cleaning your:

- » hands
- » kitchen surfaces
- » utensils
- » fruits and vegetables
- » reusable grocery bags and bins

HANDS

You should always wash your hands:

- » before and after touching raw meat, poultry, fish and seafood
- » after using the washroom
- » after touching pets
- » after changing diapers

Wash your hands with warm, soapy water for at least 20 seconds. A hand-rub sanitizer can be used if soap and water are not available.

FRESH FRUITS AND VEGETABLES

Before you eat or cook fresh fruits and vegetables:

- » gently wash them under cool, running, drinkable water
 - you do not need to use anything other than water to wash fruits and vegetables

- » use a scrub brush on fruits and vegetables that have a firm skin, such as:
 - carrots
 - potatoes
 - melons
 - squash
- » avoid soaking fresh fruits and vegetables in a sink full of water. Sinks can contain bacteria that can be transferred to your food

KITCHEN SURFACES AND UTENSILS

You can prevent the spread of bacteria in the kitchen if you:

- » clean sinks, kitchen surfaces or containers immediately after they have been in contact with raw meat, poultry, fish and seafood
- » do not reuse plates or utensils that have touched raw food
 - wash them in the dishwasher or in warm, soapy water
 - use only clean plates and utensils for your ready-to-eat foods
- » use one cutting board for ready-to-eat foods, and a different one for raw meat, poultry, fish and seafood
- » use paper towels to wipe kitchen surfaces, and change dishcloths daily
- » avoid using sponges because they are hard to keep bacteria-free
- » clean your countertops, cutting boards and utensils before and after preparing food using a kitchen sanitizer (follow the directions on the container) or prepare a bleach solution in a labelled spray bottle (you can use a ratio of 5 ml of household bleach to 750 ml of water) and rinse with water



WHAT DO I NEED TO KNOW WHEN COOKING FOOD?

It is not always possible to tell if food is safe by its colour or how long it has been cooked. Cooking food according to the proper internal cooking temperature can help you make sure your food is safe to eat. Always cook raw meat, poultry, fish and seafood to a safe internal temperature. Follow these tips to avoid eating undercooked meat:

- » Use an instant read digital food thermometer for a more accurate reading. Meat can turn brown before all the bacteria in your food are killed.
- » Remove your food from the heat and insert the digital food thermometer into the thickest part of the meat. Make sure it is inserted all the way to the middle and does not touch any bones.
 - For hamburgers, insert the digital food thermometer into the side of the patty, all the way to the middle.
- » When cooking several pieces of meat, make sure to check the internal temperature of the thickest pieces. Food can cook unevenly.
- » Keep hot foods at or above 60 °C (140 °F). Bacteria can grow quickly in the temperatures between 4 °C to 60 °C (40 °F to 140 °F).
- » Use only clean plates and utensils for cooked meat to avoid contamination with raw meat juices.
- » Clean your digital food thermometer in warm, soapy water between each temperature reading.



SAFE INTERNAL COOKING TEMPERATURES CHART

MEAT, POULTRY, EGGS AND FISH	TEMPERATURE
Beef, veal and lamb (pieces and whole cuts)	
Medium-rare	63 °C (145 °F)
Medium	71 °C (160 °F)
Well-done	77 °C (170 °F)
Mechanically tenderized beef (solid cut)	
Beef and veal	63 °C (145 °F)
Steak (turn over at least twice during cooking)	63 °C (145 °F)
Pork (ham, pork loin and ribs)	
Pork (pieces and whole cuts)	71 °C (160 °F)
Ground meat and meat mixtures (burgers, sausages, meatballs, meatloaf and casseroles)	
Beef, veal, lamb and pork	71 °C (160 °F)
Poultry (chicken and turkey)	74 °C (165 °F)
Poultry (chicken, turkey and duck)	
Pieces	74 °C (165 °F)
Whole	82 °C (180 °F)
Eggs	
Egg dishes	74 °C (165 °F)
Seafood	
Fish	70 °C (158 °F)
Shellfish* (shrimp, lobster, crab, scallops, clams, mussels and oysters)	74 °C (165 °F)
Other foods	
Other foods (hot dogs, stuffing and leftovers)	74 °C (165 °F)

* Checking the temperature of shellfish with a food thermometer can be hard. Because of this, eat only the shellfish that have opened after being cooked. Discard the rest.

LEFTOVERS

Even leftovers can cause food poisoning if not properly stored or reheated. Follow these tips to help prevent you from getting sick:

- » You can quickly cool leftovers by putting them in shallow containers. To lower the chances of bacteria growing in your food, you should refrigerate or freeze leftovers as soon as possible.
- » Perishable food should not be left out for more than:
 - 1 hour during summer outdoor activities.
 - 2 hours at room temperature.
- » Store leftovers safely by cutting and deboning the meat from large cooked birds, such as turkey.
- » Avoid overstocking your fridge, so that cool air can circulate better.
- » Eat refrigerated leftovers as soon as possible (within 2 to 4 days).
- » When reheating food, make sure it is cooked to an internal temperature of at least 74 °C (165 °F). Bring gravies, soups and sauces to a full rolling boil and stir during the process.
- » You should avoid reheating the same leftovers more than once.

HOW DOES THE GOVERNMENT OF CANADA PROTECT YOU FROM FOOD POISONING?

The Government of Canada is committed to food safety. Health Canada has rules and standards to make sure that food sold in Canada is safe and nutritious. The Canadian Food Inspection Agency enforces Health Canada's requirements.

For more information:

» Canada.ca/FoodSafety